The Air Force Acquisition And Sustainment Process Model

Early Working Copy For Discussion Only

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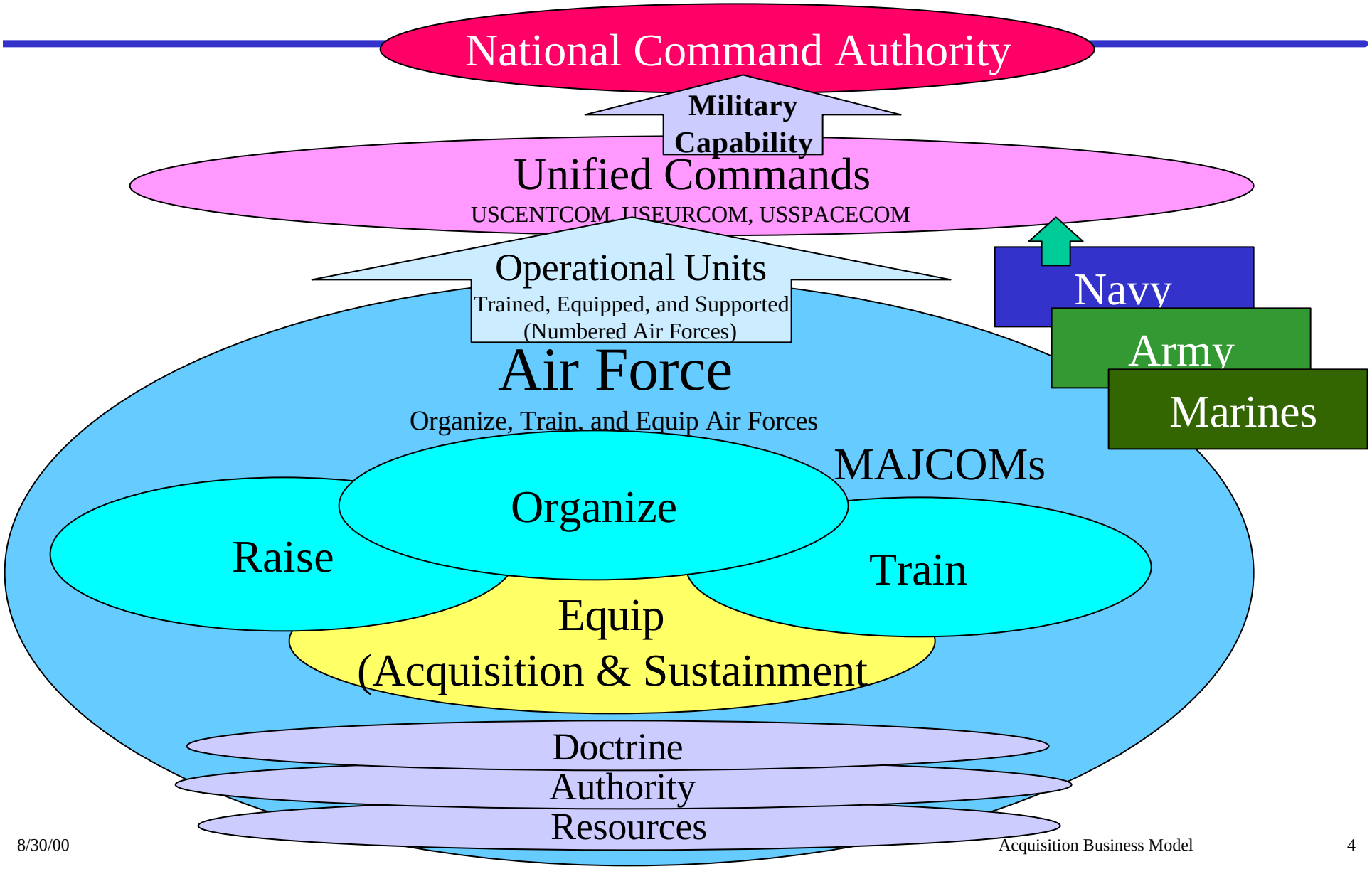
Outline

- Draft Cycle Time Model Overview
- Product Development Draft Example
- Extra Process Maps

Air Force Cycle Time Model

- Simplified Model of Current Business Practices
  - Multi-layered Model with Expanding Detail
  - Captures All Major Business Processes
- Provides Structure and Context for Discussion
  - Provides Consistent Framework
  - Provides Consistent Nomenclature
  - Provides Map to current/planned Actions
  - Allows Discussion of Cycle Time in Different Contexts
- Defines Measurement Start and Stop Points
- Currently in Early Draft Form

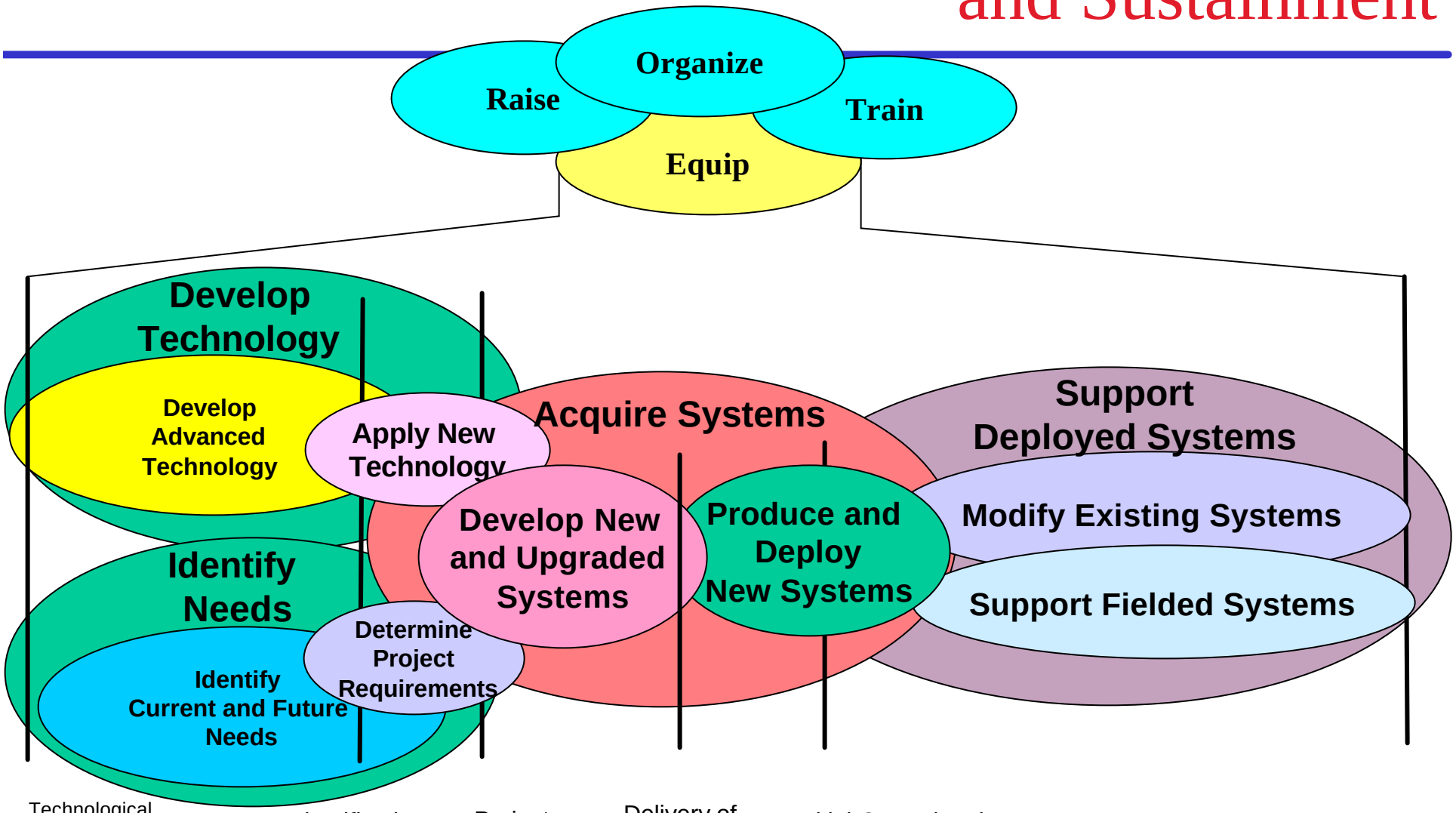
Level 0 - Support to National Security



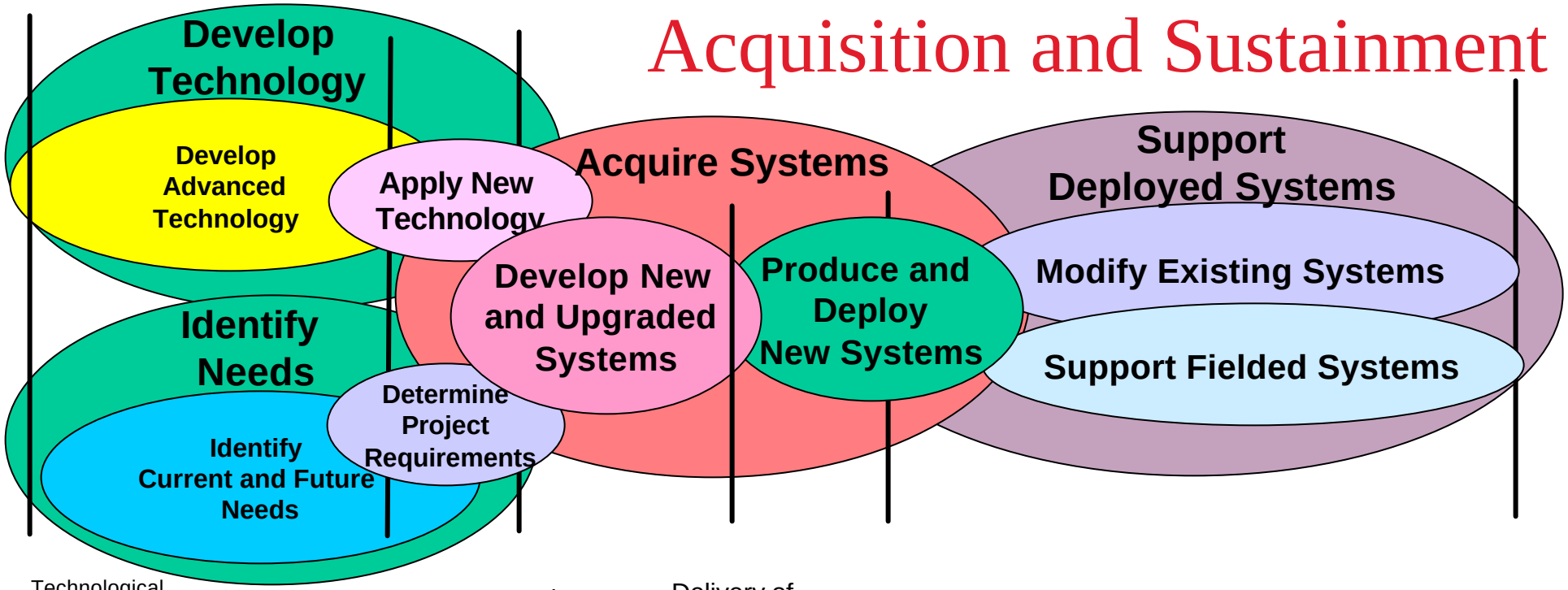
Planned Cycle Time Model Focus Areas

- **Pre-Program Actions**
  1. **Technology Development**
  2. **Requirements**
- **Acquisition**
  3. **Product Development**
  4. **Production**
- **Sustainment**
  5. **Modification**
  6. **Replacement Parts/Repairs**
- **Supporting Processes**
  7. **Resource Allocation**
  8. **Contracting**

Level 1 Equip - Acquisition and Sustainment



Level 1 Equip - Acquisition and Sustainment



Enabling Processes

Authorize Activities

Request and Allocate Resources

Contracting Process with Industry

Supporting Processes

Manage and Train Acquisition Workforce

Support of Acquisition Infrastructure

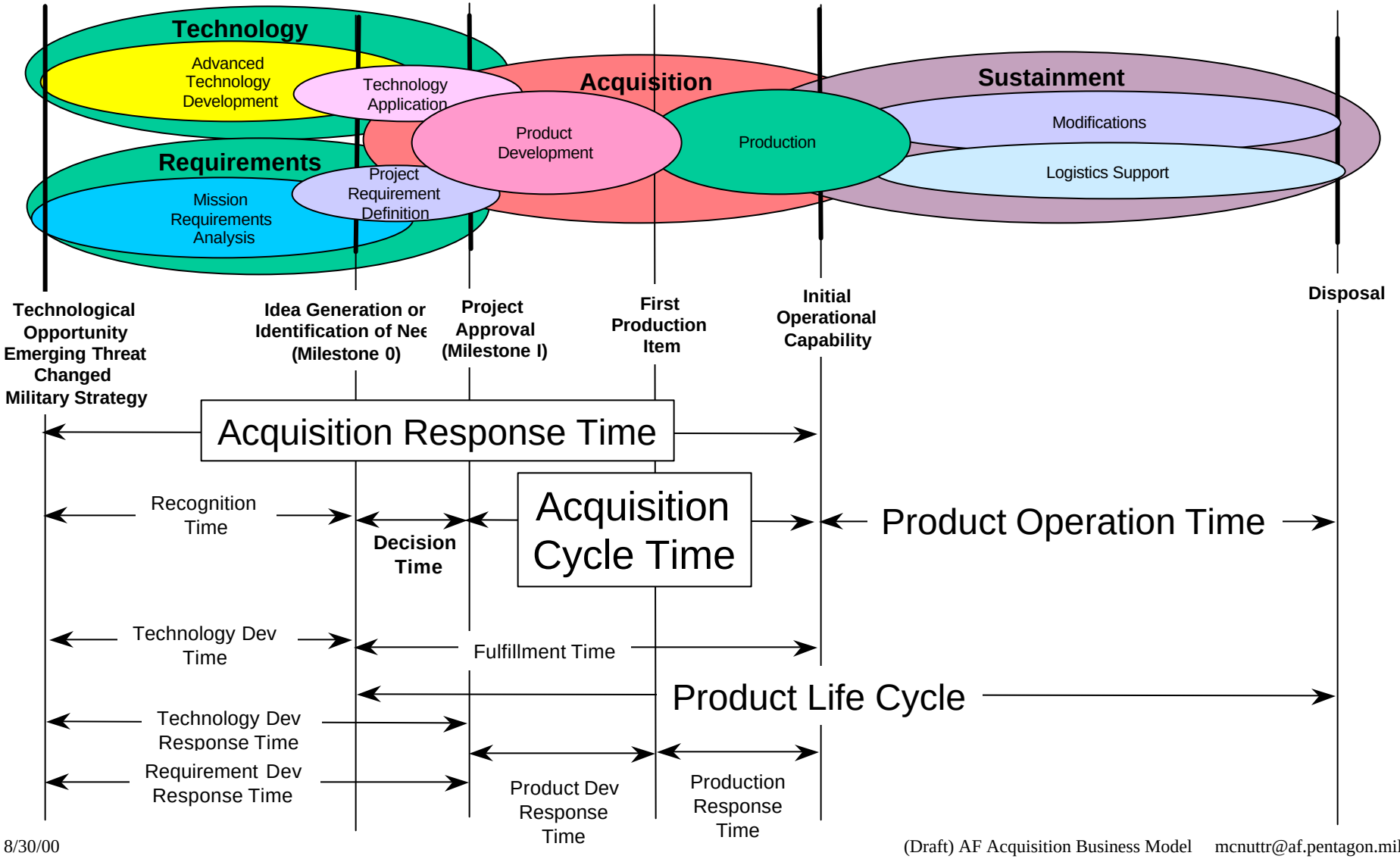
Critical Acquisition Cycle Time Measure

Acquisition Response Time

Time From a Threat, Need, or Opportunity Exists Until the Acquisition System Can Satisfy the Need or Take Advantage of the Opportunity

- Directly tied to Ability to Carry Out Mission
  - Determines time to take advantage of new opportunity
  - Determines time to respond to a new threat
    - Determines duration and depth of Military vulnerability
  - Determines time to carry out a new military strategy
- Key To Sustainable Competitive Military Advantage
  - Faster response time then the opponent
  - Faster response time then the opponents acquisition time ensures technological advantage

Product Cycle Time Structure



Acquisition Response Time Definitions

- Response Time - Time from a Threat, Need, or Opportunity Exists until the Acquisition System can satisfy the need or take advantage of the opportunity.
  - Recognition Time - Time from when the need or opportunity exists until it is recognized as a need or an opportunity.
  - Fulfillment Time - Time from when the need is recognized until it is filled.
  - Decision Time - Time from when a need is identified until approval of the start of the acquisition program to fill the need.
  - Acquisition Time - Time from when an acquisition program is approved until that system reaches operational capability.
  - Product Development Time - Time from when the acquisition program is started until the completion of the product and process design - First production item
  - Manufacturing Response Time - Time from the completion of the first production item until the Required Assets to meet the need are in place.
  - Requirements Development Time - Time to define the requirements of the system to be developed
  - Technology Application Time - Time to develop an emerging technology to be ready for inclusion into a weapon system

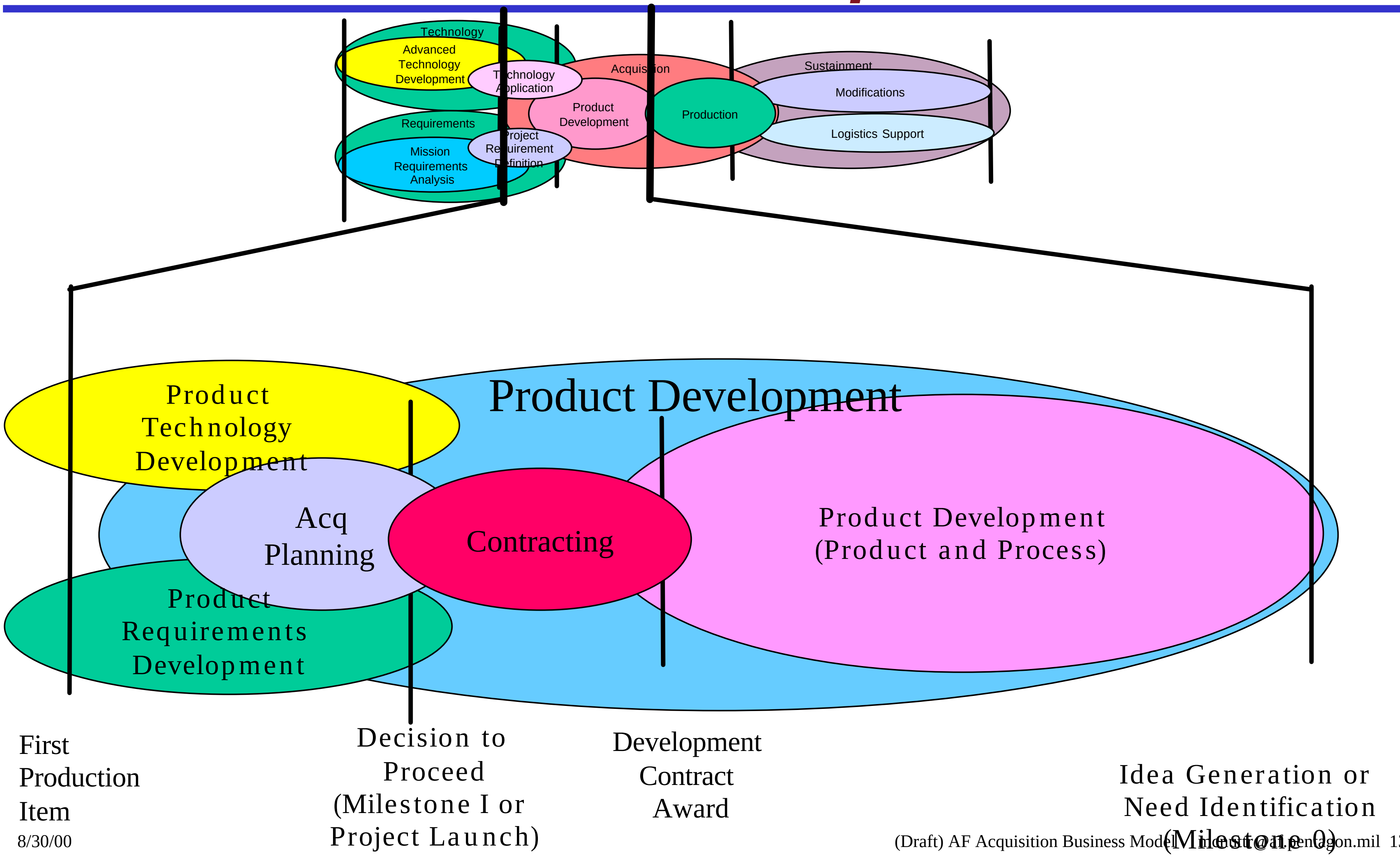
Air Force
Product Development

Model Phase Example

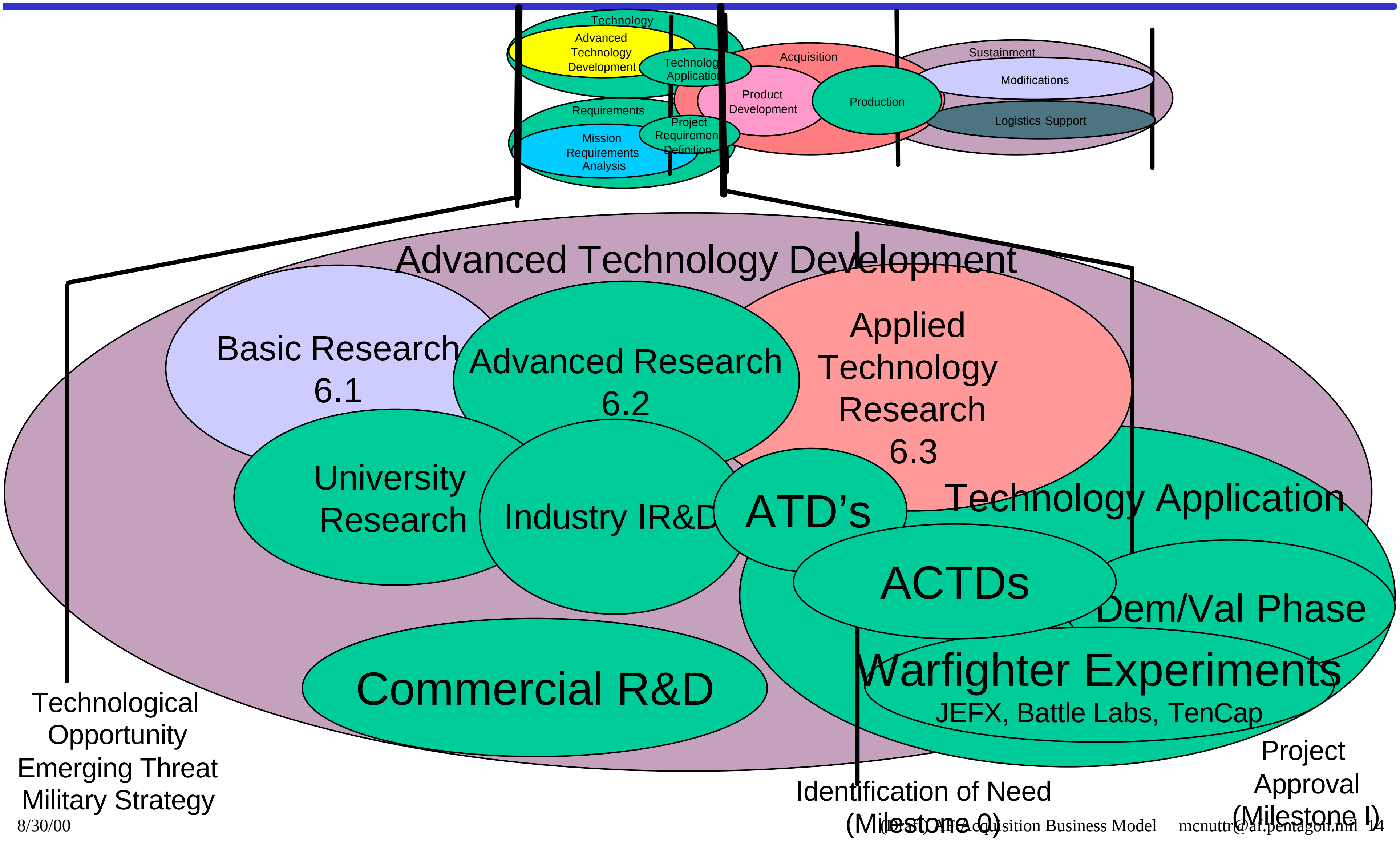
Product Development Phase

- Title: Product Development
- Purpose: To Design the Project and the Process to Produce it.
- Major Components/Processes:
  - Project Requirements Definition
    - ORD Review Process
  - Project Technology Identification and Transition
  - Acquisition
    - Acquisition Planning Process
    - Contracting Process
    - Product and Process Development

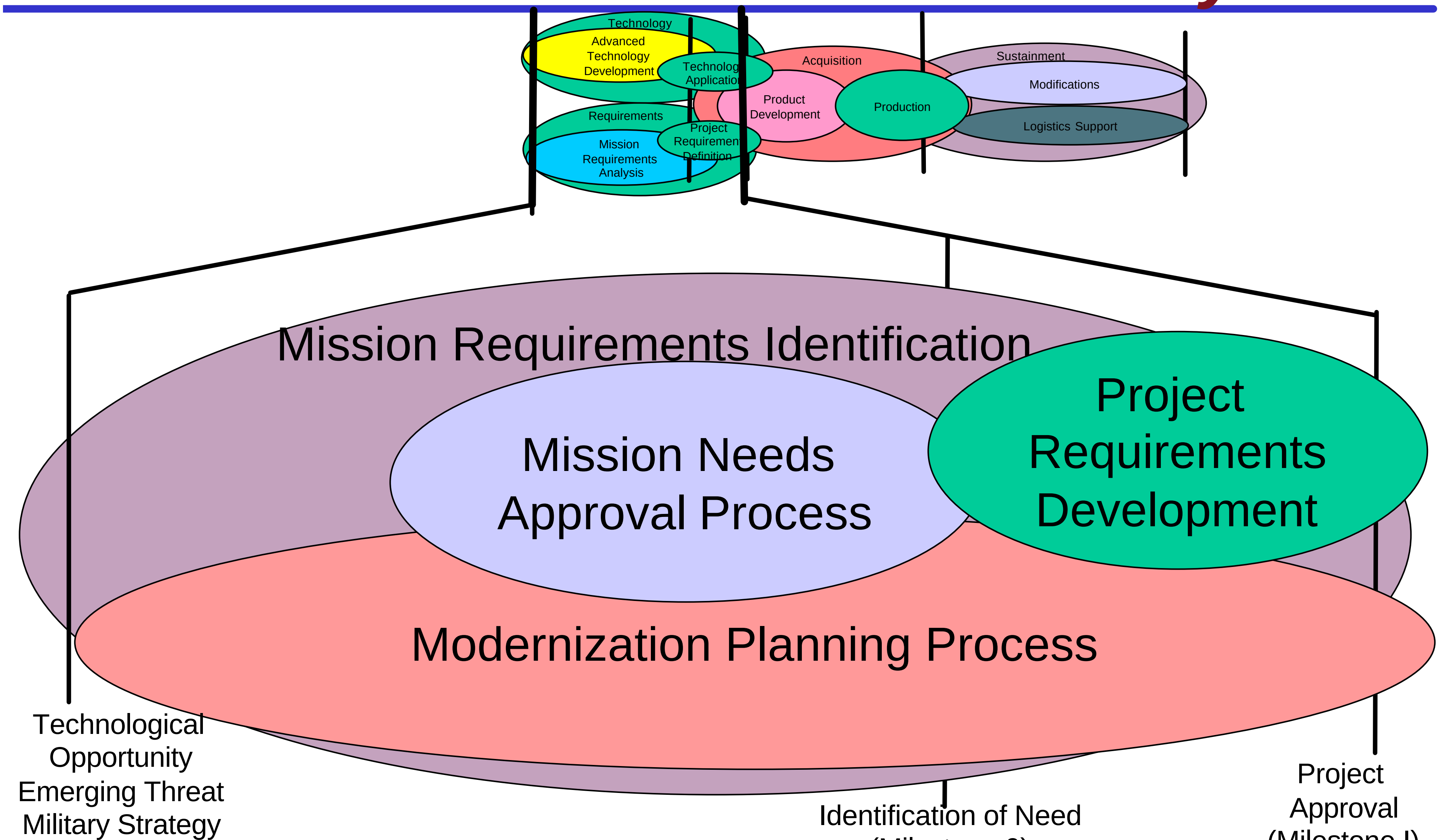
Level 2 Example: Product Development Structure



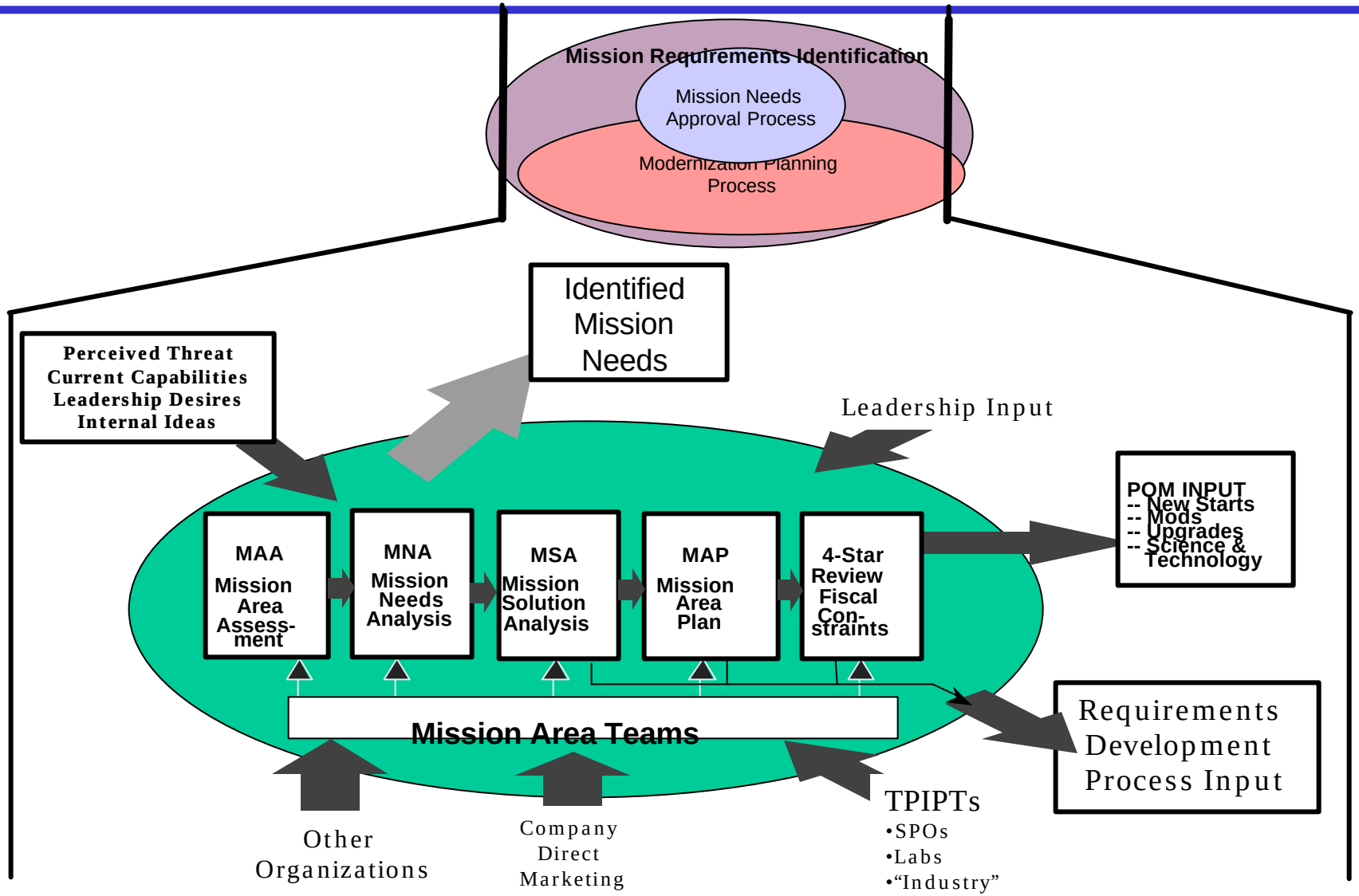
Level 2: Technology Processes



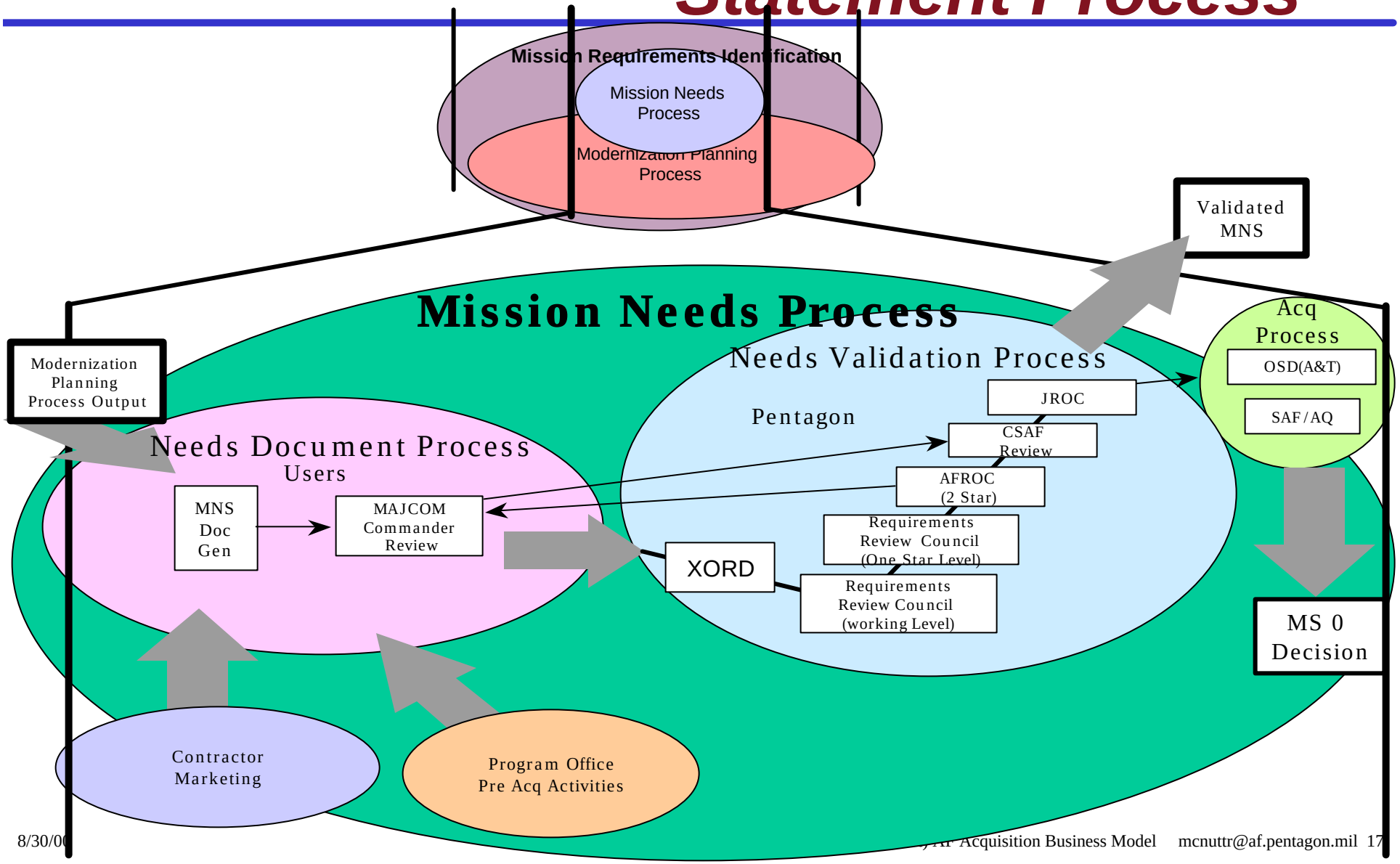
Level 2: Mission Requirements Analysis



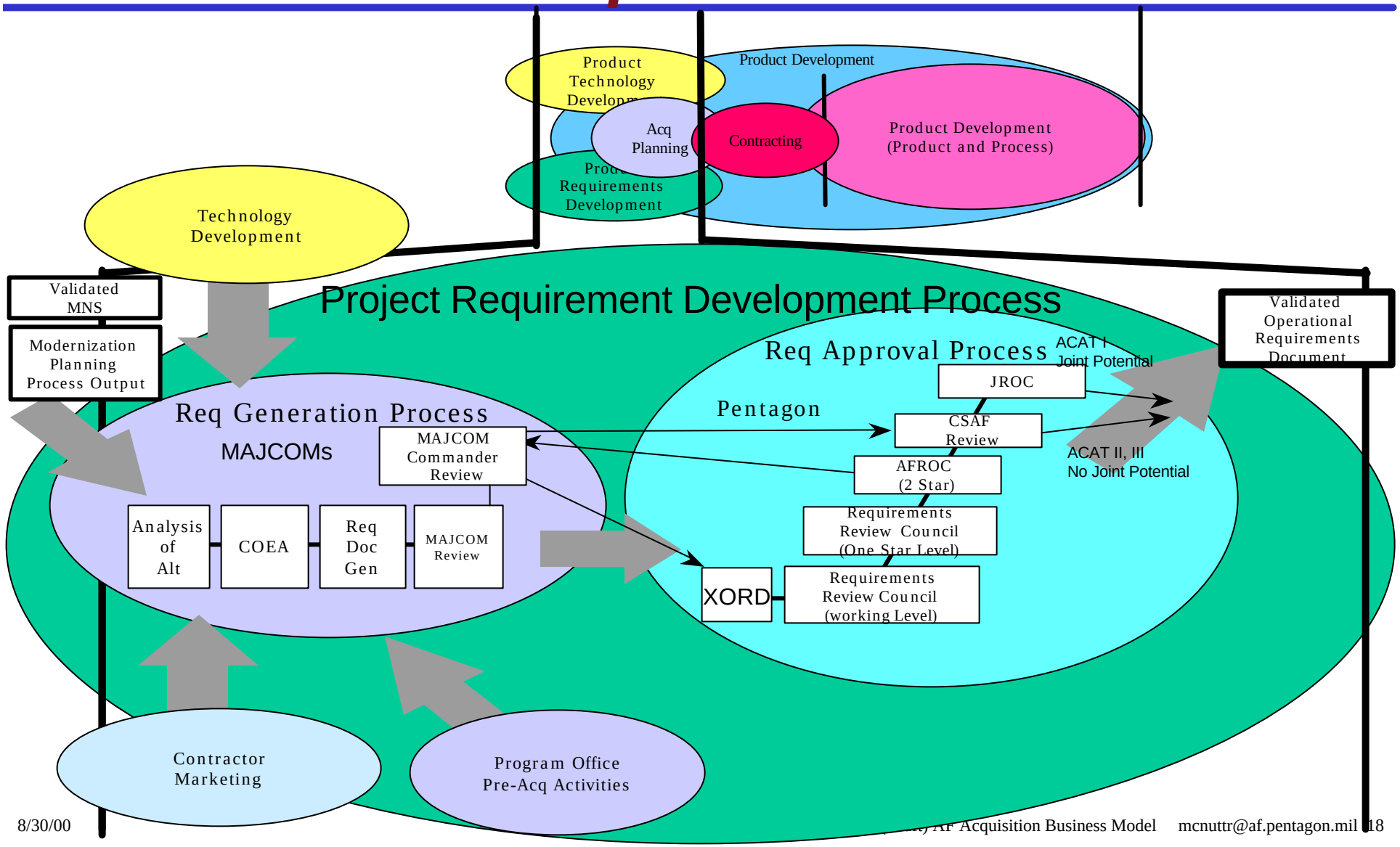
Level 3: Modernization Planning Process



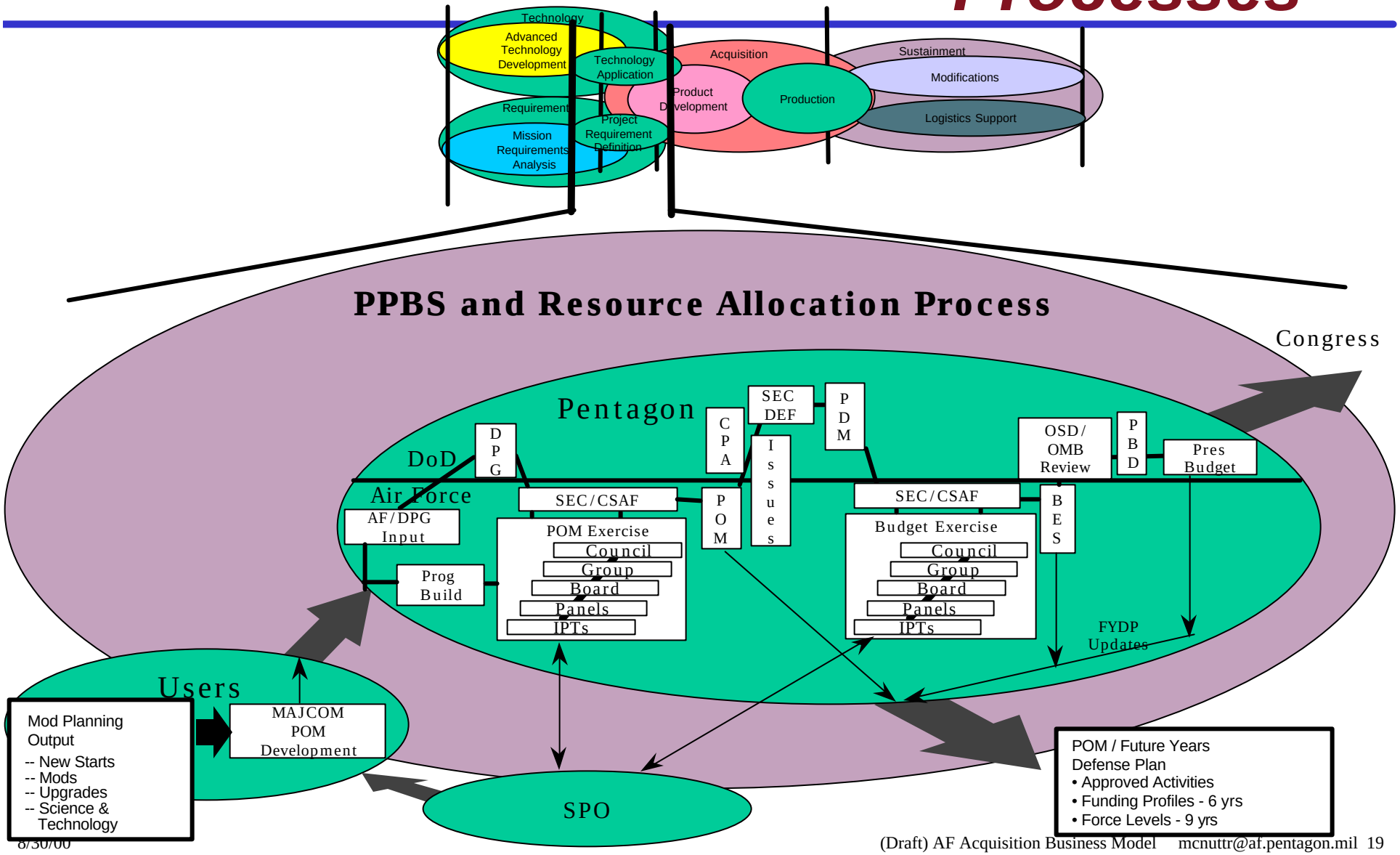
Level 3: Mission Needs Statement Process



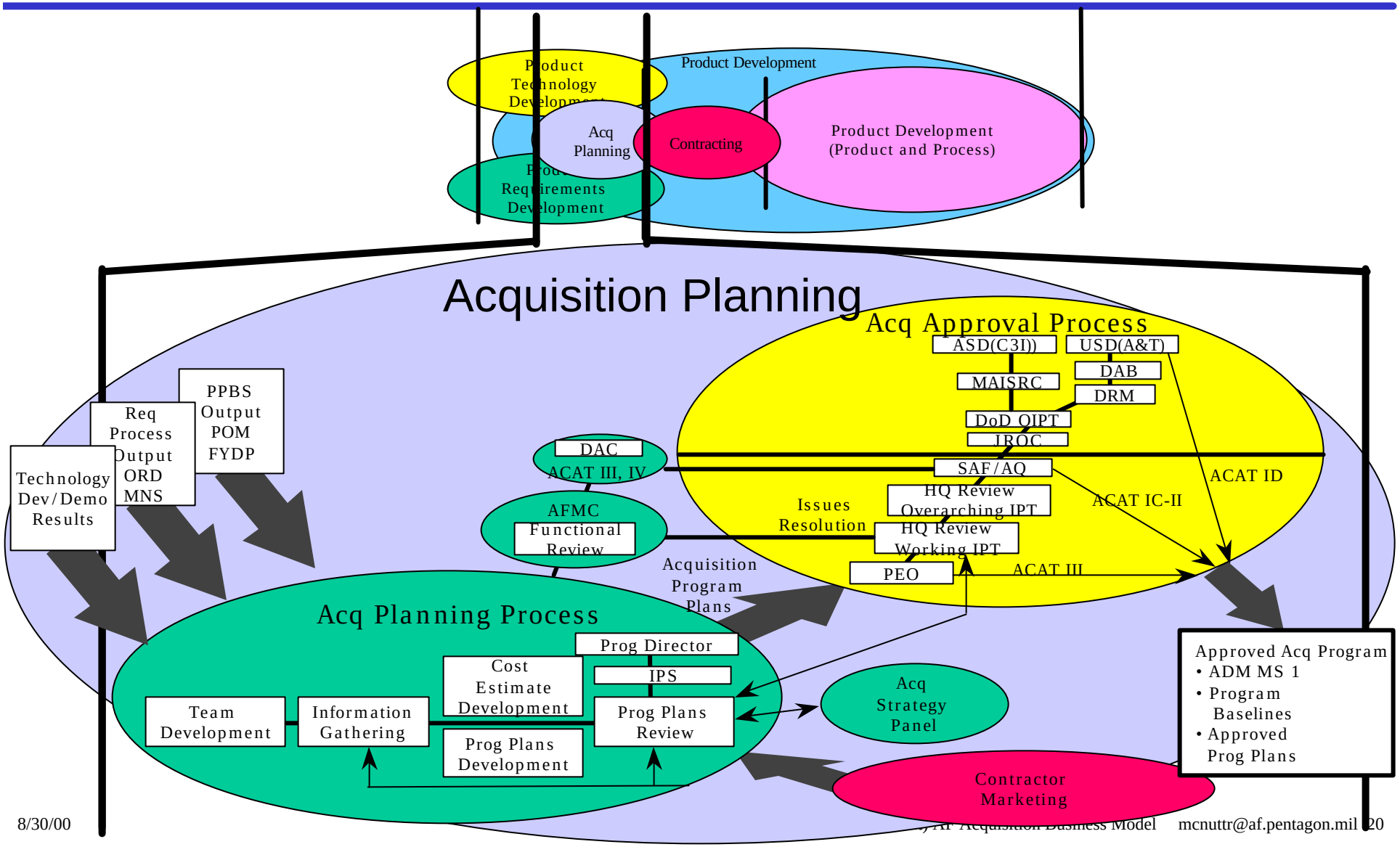
Level 3: Project Requirements Definition



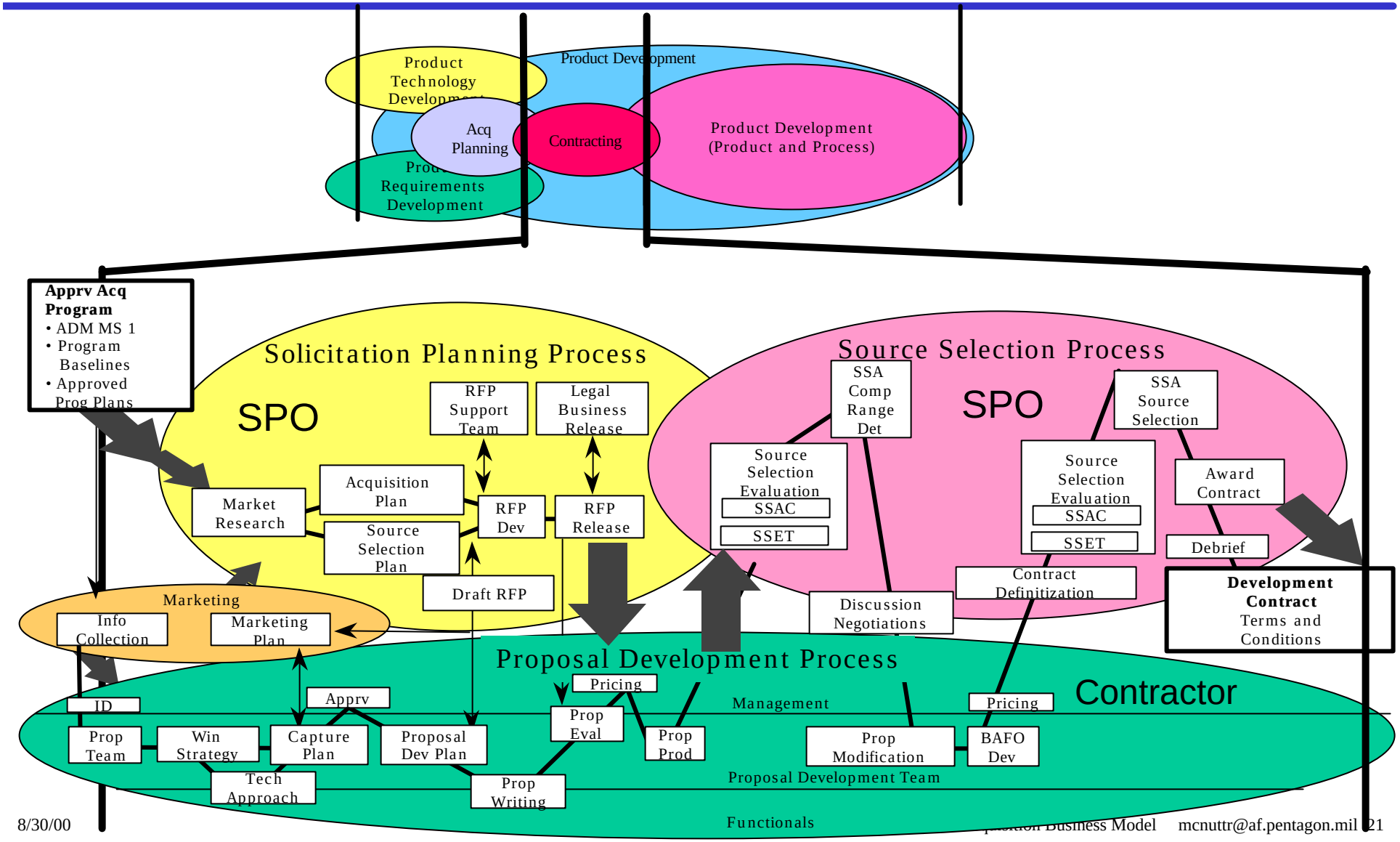
Level 3: Resource Allocation Processes



Level 3: Acquisition Planning and Approval Process



Level 3: Contracting Process Model Structure



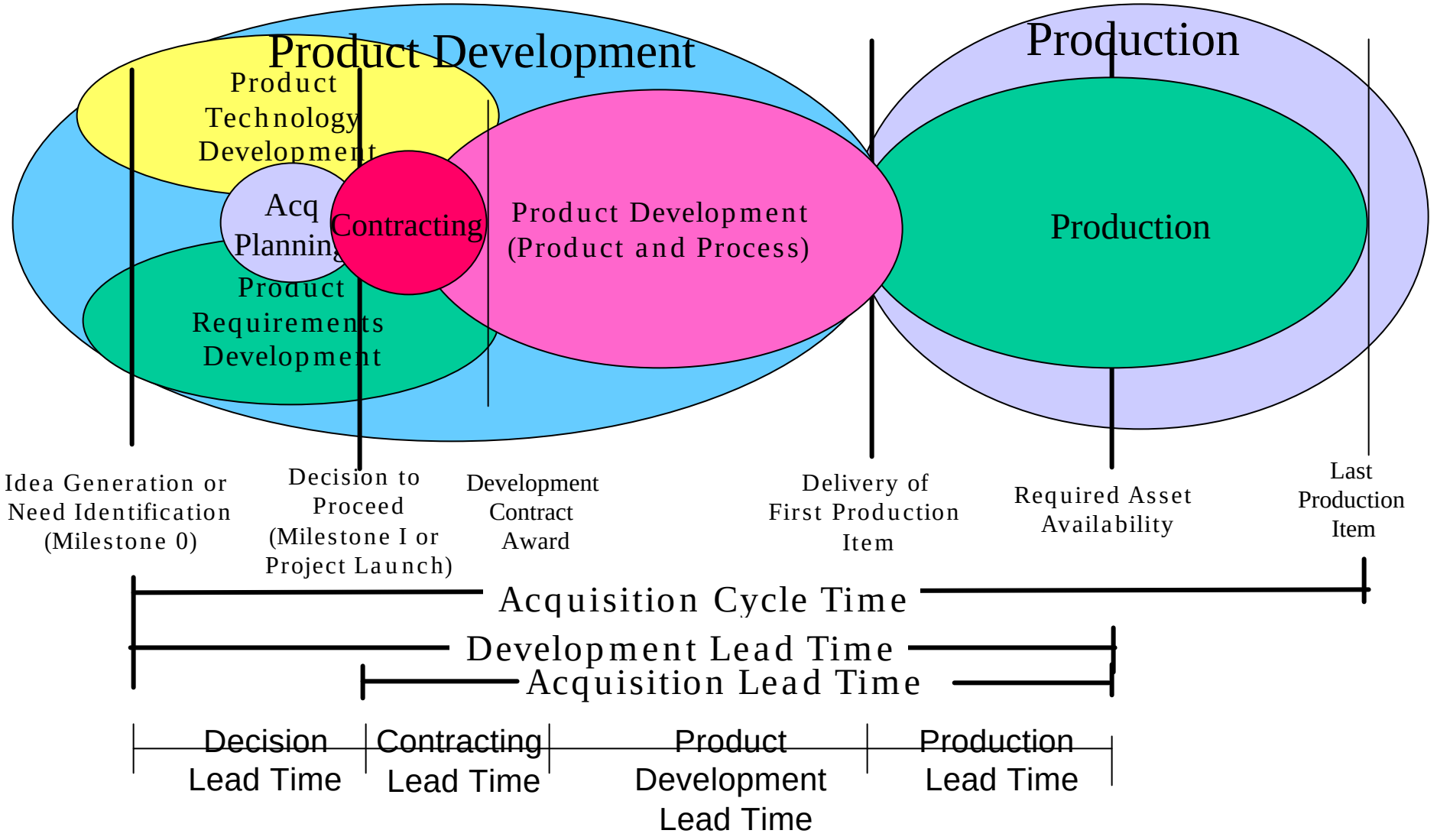
Additional Processes

- Need to add
  - Systems Engineering Processes
  - Financial Review Processes
  - Subcontracting Processes
  - Engineering Change Processes
  - Subsequent Milestone Review Processes
  - Testing Processes (DT&E, OT&E)
  - Logistics Support Development Process
  - C4 Integrated Support Process
  - Production Process
  - Acceptance Process
  - Payment Process

Product Development Phase

- Recommended Start/Stop Points
  - Milestone 0 to First Production Item
  - Milestone I to First Production item
- Process Characteristics (Recurring Processes or One Pass Process)
  - One Pass Process per Project
- Organizations Involved
    - Project Requirements Definition, MAJCOMs, XOR
      - ORD Review Process, XORD, HQ AF
    - Project Technology Transition - Labs, Industry, SPO's
    - Acquisition Processes
      - Acquisition Planning - SPO's
      - Acquisition Approval - Dev Centers, AFMC, AQ
      - Contracting - SPO's, AFMC, AQ, Defense Industry
      - Product and Process Development - SPO's, Defense Industry

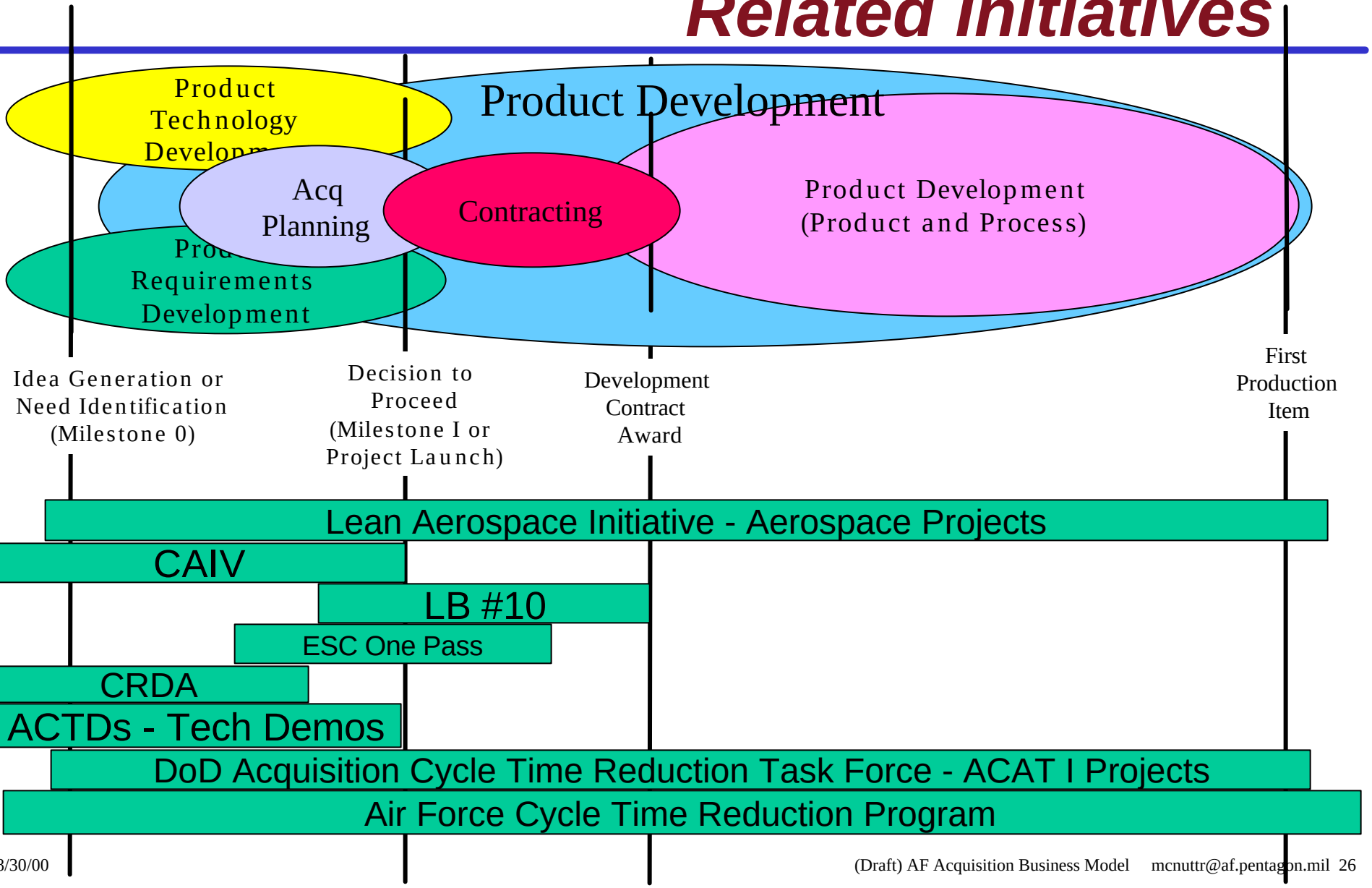
Acquisition Cycle Time Structure



Product Development Initiatives

- Ongoing/ Recent Cycle Time Related Initiatives
  - Lean Aerospace Initiative - Reducing time to develop new systems. Requirements Development, Technology Insertion, Product and Process Development
  - CAIV - Requirements Definition - Cost/Performance trade off during projects requirements determination stage. Can effect schedule.
  - LB #10 - Contracting Process - Reducing the Time to Contract Award
  - Cooperative Research and Development Agreements - Aimed at Demonstrating Application of Technology to Projects
  - Advanced Concept Technology Demonstrations - Technology Demonstrations - Aim Defining Requirements and Transitioning Technology
  - ESC One Pass Process (AWACS) - Sole Source Acq Planning and Contracting
  - DoD Acquisition Cycle Time Reduction Task Force - Reducing the Time to Field New MDAP systems - Time to Model of Acquisition and Acquisition Milestones
  - AF Cycle Time Reduction Tiger Team - Reduce time to field new Air Force Systems

Product Development Related Initiatives



Summary

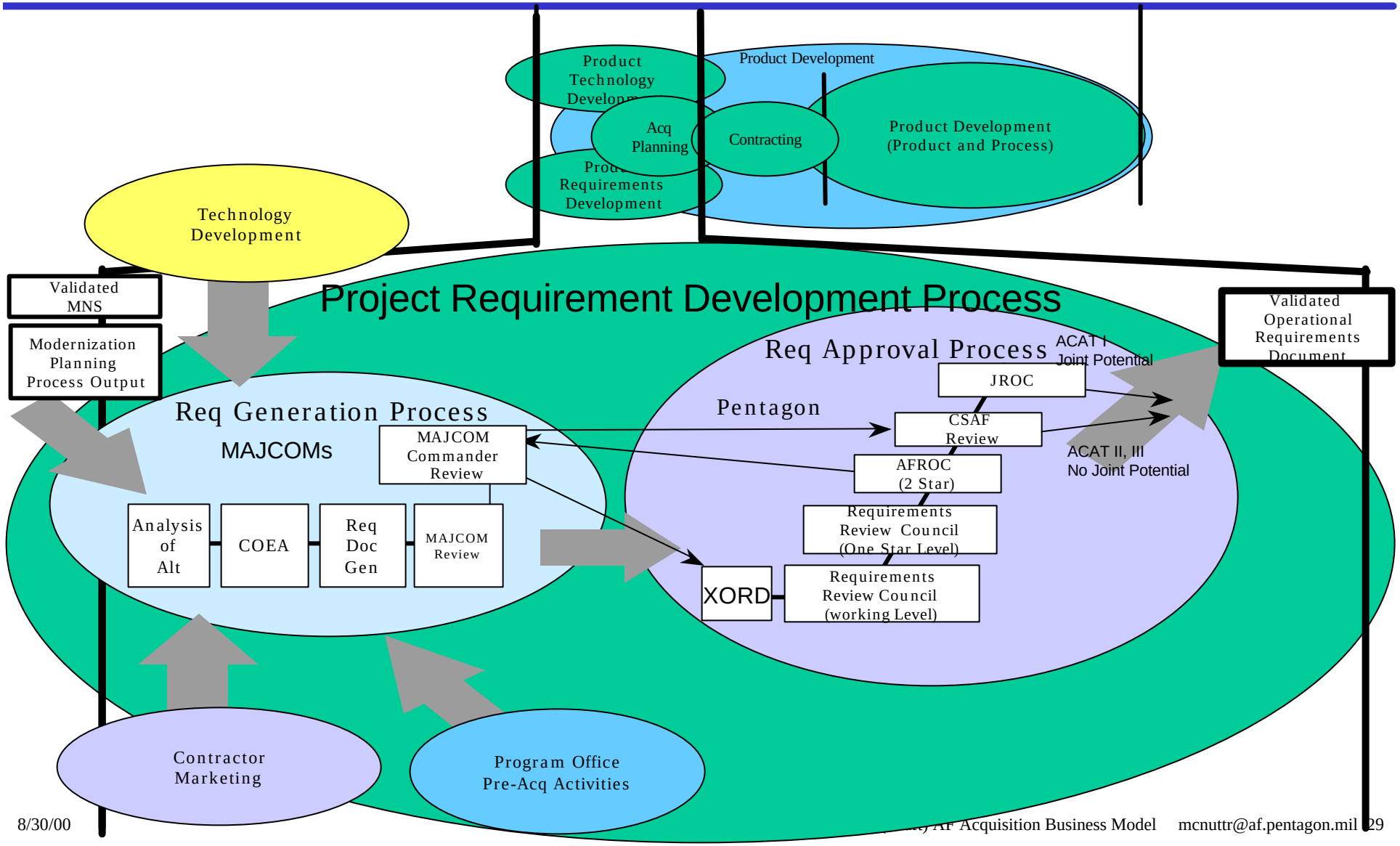
- There are a lot of steps and a lot of processes in Air Force Acquisition
- Process Mapping shows need and opportunity for streamlining activities and reviews
- Based on work done, plan to focus efforts on decision processes leading to initiation of project.
  - Process takes 2-5 years to complete. Within Air Force control to change.
  - Drives cycle time as shown by MIT Lean Aerospace Initiative Cycle Time Research

Other Process Charts from Previous Efforts

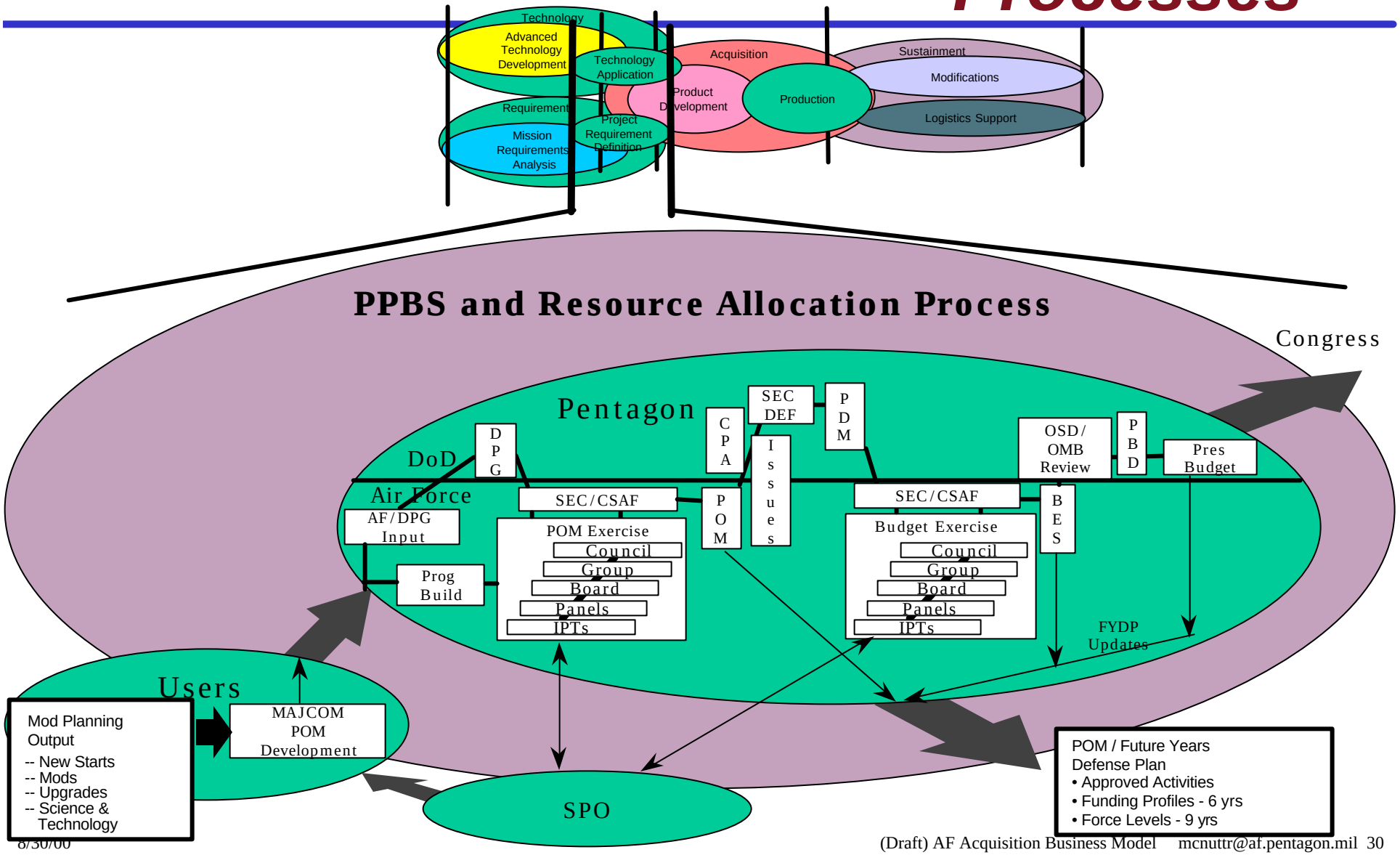
Provided for your use if you want

May be a starting point

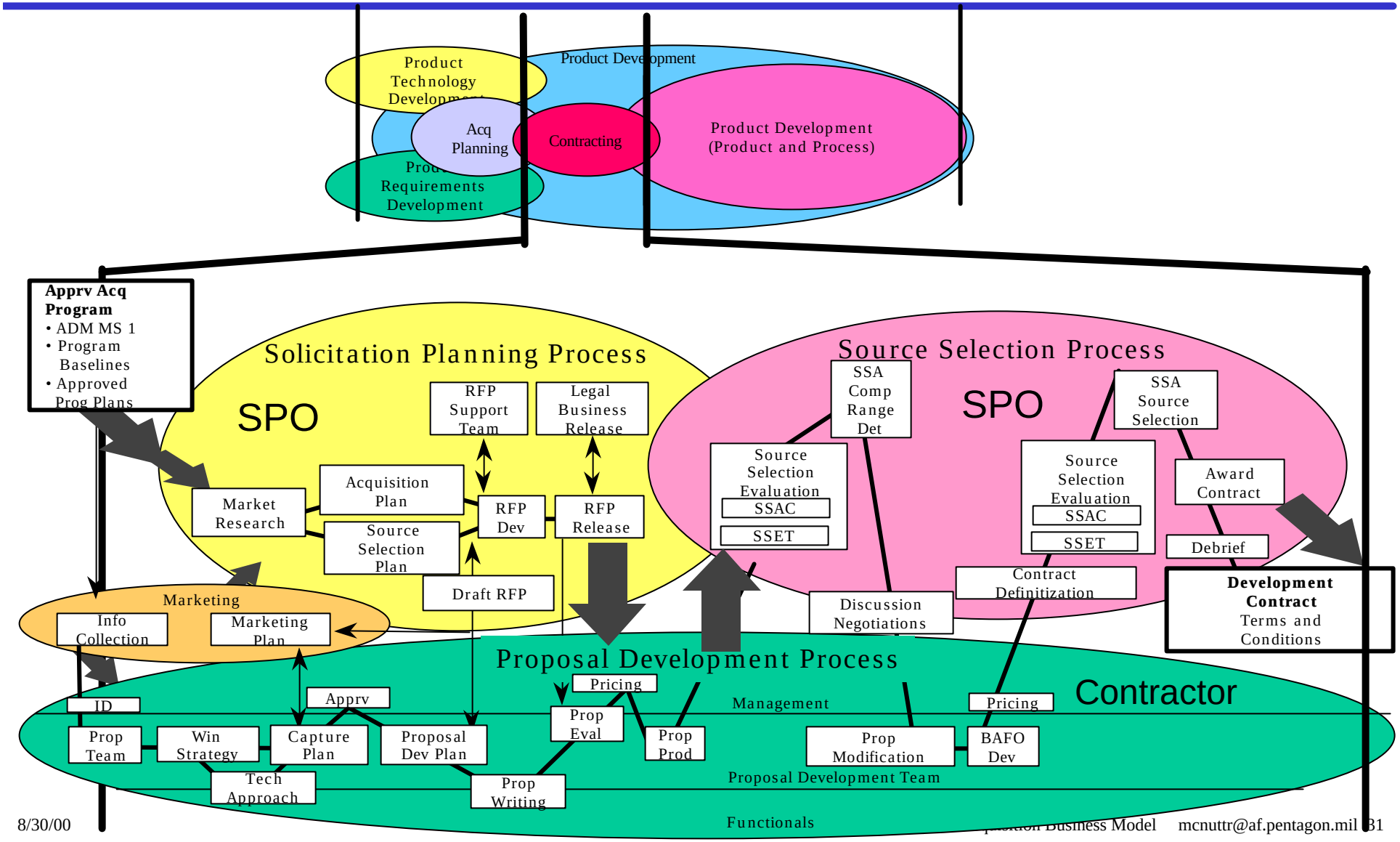
Project Requirements Definition



Resource Allocation Processes



Level 3: Contracting Process Model Structure



Production Processes